Panasonic ®

DBS
Digital Business System
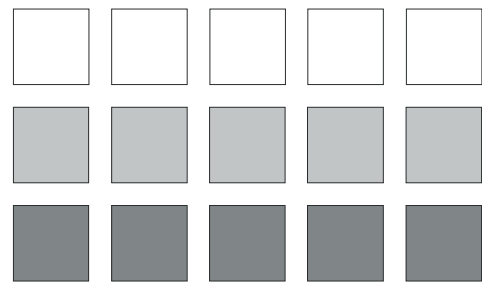
Section 520

DBS Telephony Services

Installation and Feature Description
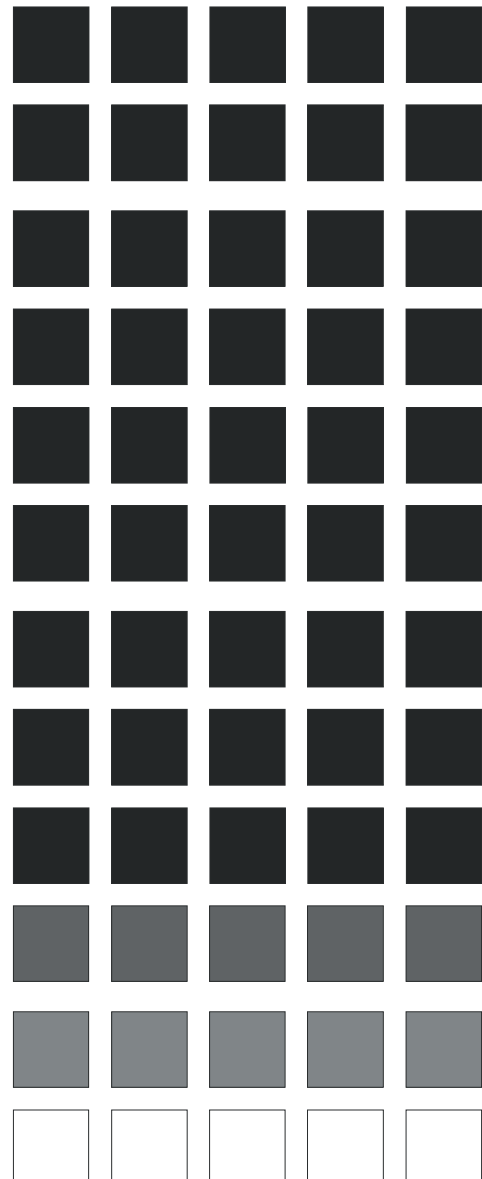
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Chapter 1. Overview of Telephony Services for the DBS

Most businesses already use computers and telephones extensively in their day-to-day operations. With few exceptions, however, business telephone and computer systems have historically remained independent entities - no interaction or common communication was possible between the two types of systems. Recent advances in technology have made possible the merger of the two systems into a cohesive and more effective communications and operational office tool. The technology which makes this possible is called Computer Telephony Integration (CTI).

The possibilities for CTI are endless. For instance:

- inbound callers may be routed to the most appropriate customer representative based on the caller's phone number. As the call is answered, the representative's computer screen automatically displays the customer's information.

- a computer-based phone directory may be used to not only look up a phone number but also initiate the call.

- the vast array of PBX features may be more easily utilized using computer screen icons and prompting instead of complicated telephone feature access codes and procedures.

What are the advantage to CTI?

- increased access to information

- improved sharing of information

- more effective communication

- more effective use of the telephone system

- more timely response

- improved customer satisfaction

One of the most significant emerging standards in CTI is the Telephony Services Application Programming Interface from Novell®.

Telephony Services provides computer applications with third-party call control capabilities. These applications may act on behalf of one user or a group of users. With this group orientation, Telephony Services affords easy distribution and transfer of calls and reporting of call handling

With Telephony Services, a Novell Netware® Network is required. To communicate with the DBS, a Panasonic DBS driver called "Panadrvr" (developed as a Netware Loadable Module or NLM) is installed on the telephony server. Application developers designing to Netware Telephony Services specifications can design products that communicate to the DBS driver via the Novell Tserver NLM, which is also installed on the telephony server.

The DBS talks with Panadrvr using a serial link from the Panasonic dual-port API Card. There is no physical link between the telephones and the networked computers. However, a logical link is established on the telephony server to relate a telephone to a networked computer.
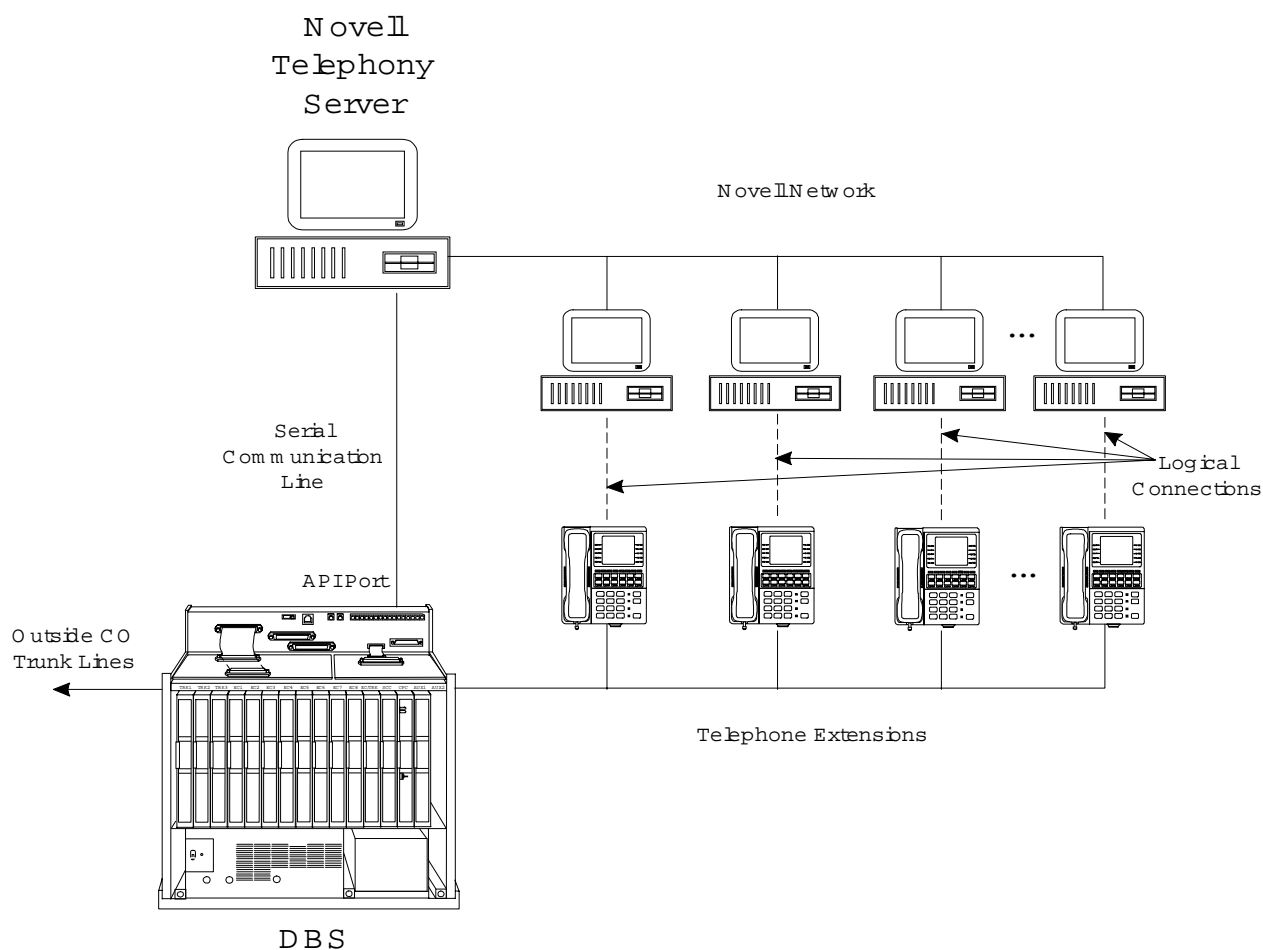
Chapter 2. Limitations and Specifications

DBS/Telephony Services Item	Capacity
Maximum DBS extension ports monitored	50 minimum
Maximum individual monitors per extension port	3
Maximum monitors per client on network	8
Maximum Outstanding CSTA requests (Applications must wait for either a positive or negative response from Panadrvr prior to issuing further requests.)	1
Maximum wait between client applications requests and driver response	45 seconds
Maximum allowable dialed digits in a MakeCall Request	32
Maximum open CSTA sessions	100

- Release 1.0 of Panasonic Telephony Services supports only Panasonic DBS digital telephones.

- For information needed for development of DBS Telephony Services applications, see the DBS Telephony Services Programming Guide (Section 470), available through your DBS regional salesperson.

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Chapter 3. Installation

Overview

This chapter describes how to install Telephony Services for use with the DBS. The first part of this chapter describes installation of the API hardware and procedures for programming the DBS. The second part of the chapter describes how to install the Panadrvr Telephony Services NetWare Loadable Module (NLM) on the Novell Server.

Requirements

- One VB-43941 Telephony Services Kit. This kit includes a Panasonic API Card, the API Serial Connector (two ports), and one 3 1/2" floppy disk containing the Panadrvr Telephony Services DBS Driver.

- DBS CPC-B or CPC-A II Version 7.<u>1</u> or later.

- A Novell 3.12 or 4.X 486 (or greater) server containing at least 8 megabytes of RAM and an available serial port of at least 9600 baud capacity (16550 UART required).

- One customized serial cable (provided). The RS232 limit of 50 feet should not be exceeded.

Telephone System Installation

The DBS communicates with the Novell server using a serial link. The VB-43941 TSAPI circuit card and API Serial Connector board provide the serial connection on the DBS. A serial port is required on the Novell Server.

Note: The Telephone System Installation procedures must be performed by the DBS Telephone Technician.

Installing the API Circuit Card/Connector

Install the API in the DBS as follows:

1. Power off the DBS.

2. Insert the API card in the DBS as shown in Figure 1. The SW1 Switch must be in the RAM HOLD (UP) position. Install the API card in either the AUX1 or AUX2 slot positions with single cabinet configurations or in the AUX1 slot position of the master cabinet with the dual cabinet configuration.

Figure 1.   DBS API Circuit Card/ Serial Connector Installation
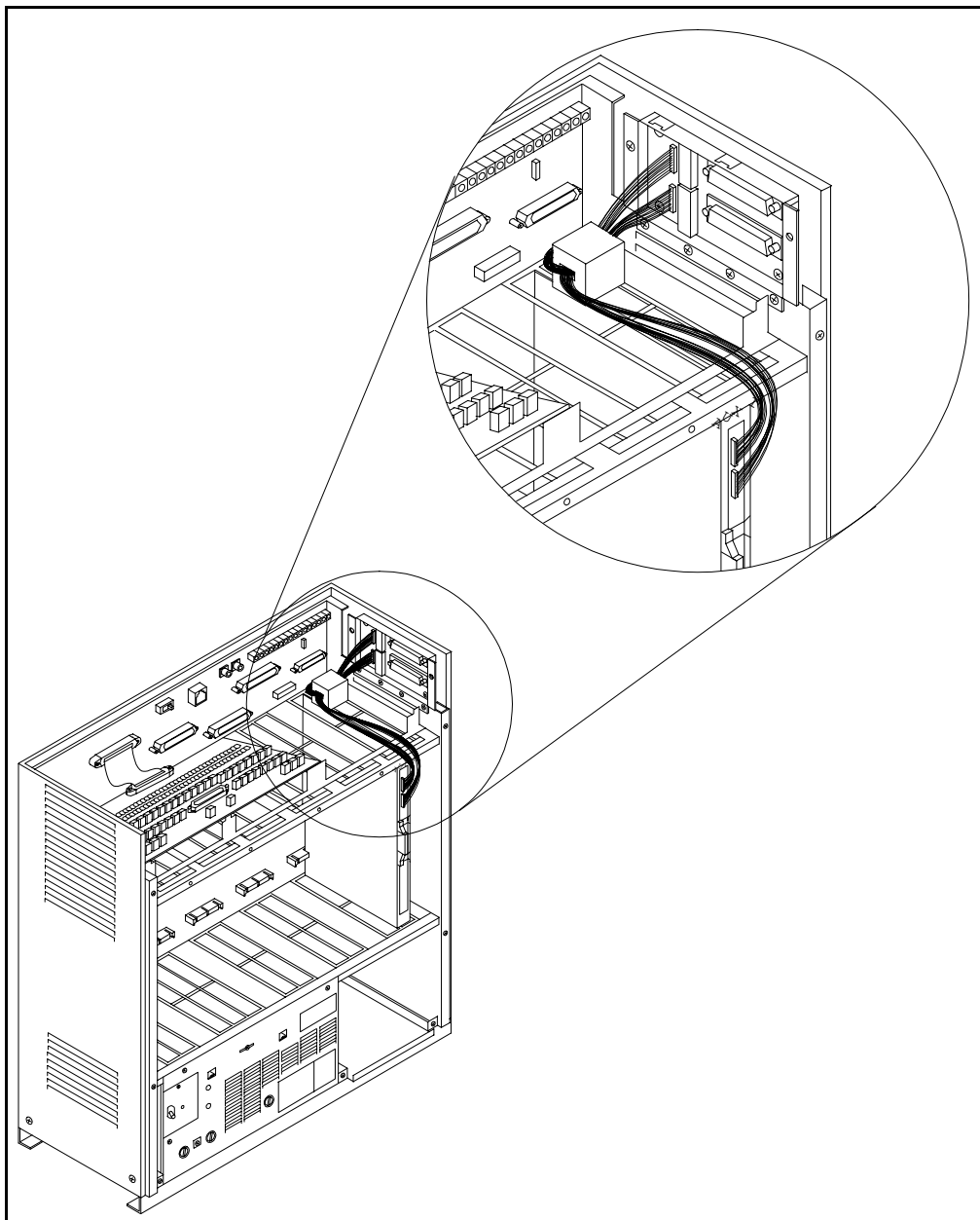
3. Attach the API serial port connector to the side of the DBS cabinet with two screws.

4. Connect the API serial port connector white cables as follows:

API Serial Port Connector	API Circuit Card Connector
Port 1 (CN102)	Port 1 (CN2)
Port 2 (CN103)	Port 2 (CN3)

5. Connect the provided serial cable from Port 1 (or Port 2) to the serial port on the Network Server. The cable must be configured as shown in Figure 2 below. The API port used must match the DBS API Port Type setting specified in FF1 2# (41-42)# 1# (0-1)# and the port specified with the NetWare Loadable Module® driver "Panadrvr". See "Programming the DBS" on page 8 and "DBS Driver Installation" on page 9 for more information.

Note: If the distance from the DBS to the server exceeds 50 feet, line extenders or short range modems are required.

Figure 2.   Telephony Services Serial Cable Pinout
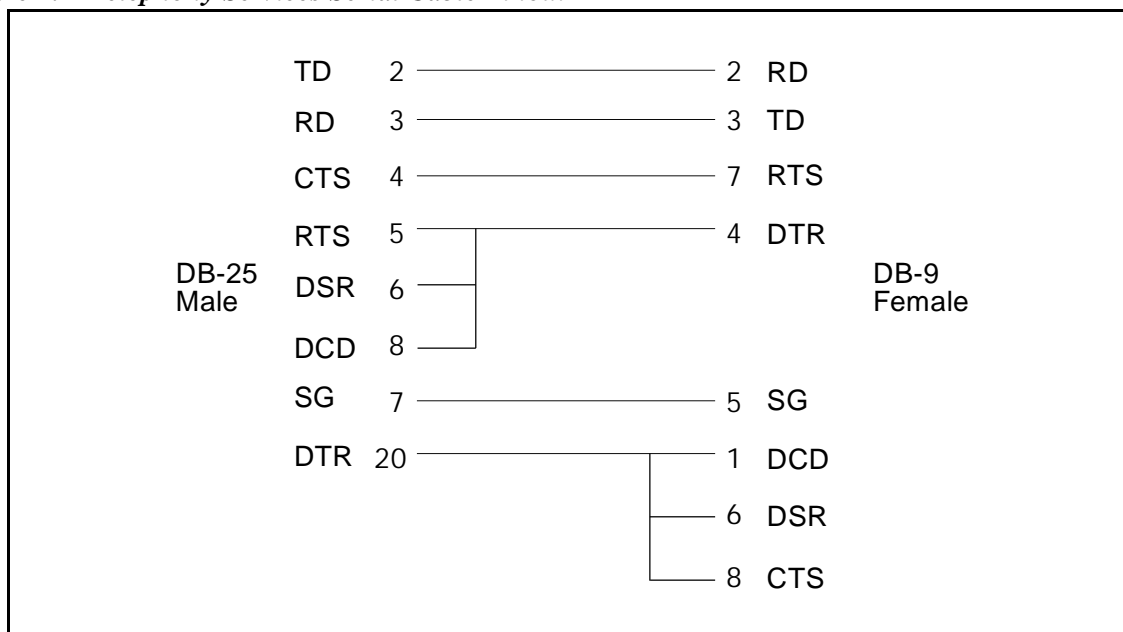
6. Power on the DBS.

Programming the DBS

1. Enter the DBS programming mode

2. Set the API port to **Telephony Services** as follows:.

Program Name	API Port Type
Address	FF1 2# 1# (41 or 42)# 1# (0-1)#

API Port Number
   41 = Port 1
   42 = Port 2

Port Type:
   0 = Standard API protocol (default)
   1 = Telephony Services protocol

Note: The Telephony Services NLM defaults to use the first port (41).

3. Set the Telephony Services API Port Baud rate to the desired baud rate as follows:.

Program Name	API Baud Rate
Address	FF1 2# 1# (41 or 42)# 2# (0-1)#

API Port Number
   41 = Port 1
   42 = Port 2

Baud Rate:
   0 = 9600 (default)
   1 = 19200

Note: If Telephony Services is the only connection to the API card, it is recommended that the baud rate be set to19200. If both API ports are used, it is recommended that both baud rates be set to 9600 bps.

DBS Driver Installation

Caution: Installation of the DBS Driver must be performed by a Novell
Netware Technician.

Overview

The Panasonic Telephony Services DBS driver 'Panadrvr' is a NetWare
Loadable Module® created to run on a Novell 3.12 or 4.X 486 (or greater)
server with at least 8 megabytes of RAM and equipped with a serial port of
9600 baud plus capacity (16550 UART required).

The driver is distributed on a single 1.44MB diskette. The diskette contains a
root directory and two sub-directories as shown.

```
\           README.TXT

            |_____ release _____ PANADRVR.NLM

            |_____ trace   _____ PANADRVR.NLM
```
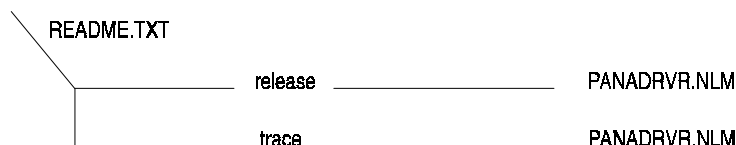
The root directory consists of a single 'readme' file which contains release
information and last minute release changes. This 'readme' file also contains
the differences between the trace and non-trace versions of the driver.

The release directory contains the non-trace enabled version of the driver and
is the driver of choice for most, if not all, customers.

The trace directory contains the trace-enabled version of the driver and
should be installed only when deemed necessary by Panasonic Technical Sup-
port. **Note:** This version is also valuable to application developers.

Installation

To install the Panasonic Telephony Services DBS driver, read the 'readme'
file on the Panadrvr diskette and then copy the appropriate version of the
driver from the diskette to the \SYSTEM directory of the 3.12 or 4.x Novell
server.

Library Dependencies

Panadrvr requires 3 runtime libraries on the server: *clib.nlm*, *aiocomx.nlm,*
and *tsrv.nlm*. Panadrvr will attempt to self-load these nlms if they are not
present at runtime. If these nlms are not present or cannot be loaded, the

Novell loader will advise of unresolved external symbols and Panadrvr will not be loaded.

Loading Panadrvr

Before Panadrvr can be loaded, Telephony Services must be installed and running and a client logged into the server as Administrator or Supervisor. During the installation process, Panadrvr is copied to the system directory of the server.

The Panadrvr NLM can be loaded manually by entering it on the command line, or automatically by adding the load command to the *autoexec.ncf* file.

In either case, the syntax for the load command is as follows:

load Panadrvr <options>

Load Options

Panadrvr has several load time options. To display a list of these options, type:

load Panadrvr?

Options must be separated from each other by a space, as shown in the following example.

load Panadrvr security=2 api=2 baud=19200 setmwi=100 port=1

Notes:

- It is recommended that the *api*, *baud*, and *security* options be specified each time Panadrvr is loaded. If Panadrvr is to be loaded automatically, add these options to the load command line in *autoexec.ncf*.

- Command line options specified after the configuration file is read override any options specified in the configuration file.

Option: api=

Range: 1 or 2

Default: 1

Runtime modifiable: No

Purpose: Specifies which DBS API port is set up for Telephony Services. This must match the DBS setting.

Option: port=

Range: 1 to 8

Default: 1

Runtime modifiable: No

Purpose: Specifies which serial port on the server PC is connected to the DBS for Telephony Services.

Option: baud=

Range: 9600 or 19200

Default: 9600

Runtime modifiable: No

Purpose: Specifies the DBS API baud rate. This must match the DBS setting.

Option: security=

Range: 1 to 3

Default: 2 (Medium)

Runtime modifiable: No

Purpose: Specifies the CSTA stream control security level. The values 1, 2, and 3 translate to CSTA ranges High (all commands checked for validity), Medium (login only checked for validity), and None (no checks performed), respectively. Most client applications require level 2 or above.

Option: setmwi=

Range: 10-699

Default: -1 (disabled)

Runtime modifiable: Yes

Purpose: Specifies the activator extension of a CSTA set message waiting indicator request. Normally supplied through private data, most applications are not written to support this option for Panasonic -- this allows the command to be honored by the driver and passed to the DBS. If not set, and private data not supplied, the command is rejected.

Option: sendfail=

Range: 0 or 1

Default: 1 (Enabled)

Runtime modifiable: Yes

Purpose: Specifies whether the driver should send CSTA failed events to the application when receiving busy tone from the DBS on a given monitored extension

Option: clearcall=

Range: 0 or 1

Default: 1 (Enabled)

Runtime modifiable: Yes

Purpose: Specifies whether the driver honors CSTA clearcall commands from applications. Clearcall commands allow the application to disconnect ALL parties on a given call.

Option: log

Range: N/A

Default: Off

Runtime modifiable: Yes

Purpose: Specifies whether the driver should create a trace log file in the SYS volume in the SYSTEM directory called panadrvr.log. When active, all console Trace Enabled (debug) messages are echoed to this file. Note, this option has no effect on Trace-free (non-debug) versions of Panadrvr.

Option: sendinitonmake=

Range: 0 or 1

Default: 1 (Enabled)

Runtime modifiable: Yes

Purpose: Specifies whether the driver should send CSTA service initiated events to an application when dial tone is returned from the DBS due to a CSTA makecall request.

Option: tracelevel=

Range: 0 to 4

Default: 1 (most verbose)

Runtime modifiable: Yes

Purpose: Specifies the debug trace level for panadrvr. The range is from 1 (very verbose) to 4 (major errors only) or 0 -- no trace messages. Trace messages appear on the system console and, optionally, in the log file.

Note: This option is available only in the Trace Enabled (debug) version of panadrvr.

Option: maxcalltime=

Range: 1-65535

Default: 12

Runtime Modifiable: Yes

Purpose: Specifies the maximum time in hours that Panadrvr considers a call to be valid. Should this timer expire, the call is removed from

Panadrvr and call cleared events sent to all the applications monitoring the affected extensions. Note, this has not effect on the actual DBS call.

Option: c=

Range: N/A

Default: None

Runtime modifiable: N/A

Purpose: Specifies a load time ASCII text configuration file containing the aforementioned options. The name and full path of the file must be specified.

The format of the file is as follows:

    api=1

    port=2

    /this is a comment

    baud=19200

    ...

Comments must begin at a new line. Options specified on the command line following this option override any options contained in this config file.

Option: filters=

Range: 0 or 1

Default: 0

Runtime modifiable: Yes

Purpose: Enables (1) or disables (0) Panadrvr's recognition of an application's monitor filter settings. By default, the driver ignores any application set filters. This setting does not effect the CSTAChangeMonitorFilter requests.

Setting up Telephony Services Users

Caution: **Set-up of Telephony Services Users must be performed by the Novell Netware Technician.**

Overview

The individuals or agents who use telephony services are known in the Netware Telephony Services environment as users. A user can be either an actual person or an application. Each user must have various attributes defined so that the server knows which PBX and device or extension the user is linked to.

The following information provides a brief look at creating users via the Novell Netware application. Other Tserver administration tasks such as defining PBXs, primary and secondary devices, worktops, and call control and monitor groups (if needed) should be accomplished before creating individual users. For additional information on any of these tasks, refer to the Netware Telephony Services Network Manager's Guide.

Setting up Users

Use the following procedures to set up individual Telephony Services users.

1. Log-in to the server through DOS (not Windows). At the DOS prompt, enter:

   login admin (for Netware release 4.0)

   OR

   login supervisor (for Netware release 3.12)

2. The system will display NetWare initialization information and then return to the DOS prompt. Enter:

   WIN (to enter Windows)

3. Click on the Telephony Services icon.

4. Click on the TServices Admin icon.

5. At "Choose TServer to access", select the appropriate server.

6. Enter the login and password for the selected server.

7. The Netware TSA screen will appear for the accessed TServer. Select Admin, then Quick Add.

8. The Quick Add dialog box will appear. Enter the following information in the appropriate fields.

- **User Login**. This is the NetWare log-in identifier for the user. This must match the user's NetWare log-in previously set up on the server.

- **User Name**. If desired, enter the name of the user. This information is optional and is provided for the convenience of the network administrator.

- **PBX**. Select the appropriate PBX the user is to be linked to.

- **Primary Device ID**. Enter an identifier for the user's primary device. This is usually the extension of the primary voice telephone at the worktop.

- **Worktop Name**. Enter the name chosen for the user's worktop when it was created. The worktop associates the user's phone with the user's PC.

9. Click "Add Data" to record the information for the user.

10. Click "Close" to close the "Quick Add" dialog box.

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Chapter 4. Driver Features

The following list reflects the Computer-Supported Telecommunication Applications (CSTA) functions supported by Panadrvr:

Basic Call Control Services:
- Answer Call
- Clear Call
- Clear Connection
- Conference Call
- Hold Call
- Make Call
- Retrieve Call
- Transfer Call

Telephony Supplementary Services
- Set Message Waiting Indicator
- Set Do Not Disturb
- Set Forwarding
- Query Message Waiting Indicator
- Query Do Not Disturb
- Query Forwarding
- Query Last Number

Status Reporting Functions
- Monitor Device
- Monitor Stop
- Monitor Ended

Call Event Reports (Unsolicited)
- Call Cleared Event
- Conferenced Event
- Connection Cleared Event

- Delivered Event
- Diverted Event
- Do Not Disturb Event
- Established Event
- Failed Event
- Forwarding Event
- Held Event
- Message Waiting Event
- Network Reached Event
- Retrieved Event
- Service Initiated Event
- Transfer Event

Chapter 5. Maintenance and Troubleshooting

Alarm Log Entries

Telephony Services Administration allows for the logging and displaying of messages from a Telephony Services driver. Panadrvr takes advantage of this service. Note that the actual messages logged, displayed, etc., depend upon current Novell Tserver settings.

Each message has the following format:

Module ID: The NLM generating the message, in our case 'Panadrvr'.

Level: The importance of the alarm. Telephony Services allows the following levels:

FATAL:	FATAL condition (calling module aborting)
WARNING:	non-service-affecting condition
CAUTION:	unexpected software error (non-fatal)
ERROR:	non-fatal, service-affecting condition
AUDIT_TRAIL:	important (normal) event
TRACE:	trace message for debugging

Location: The source code location from where the alarm was generated. Panadrvr uses the following algorithm:

((Source_Code_Line_Number * 1000) + (Module_ID_Number)).

Thus, for any given alarm the least 3 significant digits represent the Internal Source Code Module ID while the most significant bits represent the line number within this module. This selection is intended for Panasonic Technical Support use only.

Error Code: Panadrvr uses this value as a cumulative alarm count.

"FATAL" Messages:

These alarms indicate Panadrvr is shutting down.

TDILOGERROR(dname, FATAL, ALMLOC, alarmcnt++, "Unloading via user request.").

The user has selected the Panadrvr shutdown driver option from the Panadrvr Menu and Panadrvr is exiting.

TDILOGERROR(dname, FATAL, ALMLOC, alarmcnt++, "Driver exiting.", OurName).

This alarm is generated when the CSTA network handler task has been told to shut down. It indicates that Panadrvr is no longer available for CSTA services.

TDILOGERROR(dname, FATAL, ALMLOC, alarmcnt++, "Driver unloading via signal handler.").

This alarm indicates an abnormal Panadrvr termination.

"WARNING" Messages:

TDILOGERROR(dname, WARNING, ALMLOC, alarmcnt++, "Buffer High Water Mark Reached\n").

The Novell Tserver has told Panadrvr that memory resources are getting low.

"CAUTION" Messages:

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "DBS return from Level 1 failure.").

The DBS has returned from a level 1 (1st failure) failure situation.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "DBS back on line.").

The DBS has returned from a level 2 (full failure) failure situation.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "DBS deadman timer fail (DBS is on alert).").

The DBS did not respond to Panadrvr's keep alive packet. Panadvr will wait 60 seconds and try again.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "Received unknown ACS request(0x%0x).", idc->messageType).

Panadrvr received an unknown ACS request from either a client application or the Novell Tserver itself. This should be reported to Panasonic Technical Support for investigation.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "Received unknown packet type (0x%0x) from DBS.", rpp->code).

The DBS has transmitted a packet of unknown meaning to Panadrvr. This should be reported to Panasonic Technical Support.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "Received unknown tone event (0x%0x) from DBS.", etp->sublow).

The DBS has sent Panadrvr a Tone Event that Panadrvr does not understand. This should be reported to Panasonic Technical Support.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++,
"Received unknown CSTA event (0x%0x) from DBS.", etp->sublow).

> The DBS has sent Panadrvr a CSTA Event that Panadrvr does not
> understand. This should be reported to Panasonic Technical Support.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++,
"Received unknown conf event (0x%0x) from DBS.", bp->code).

> The DBS has sent Panadrvr a Confirmation Event that Panadrvr does
> not understand. This should be reported to Panasonic Technical
> Support.

TDILOGERROR(dname, CAUTION, ALMLOC, alarmcnt++, "DBS
didn't respond to port query request.\n").

> The driver has requested extension/port information from the DBS
> and the DBS has not responded.

"ERROR" Messages:

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Unable to
select DBS").

> This alarm indicates that the DBS is not responding to
> communication requests from Panadrvr.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "DBS did
not respond to transmitted packet").

> This alarm indicates that the DBS is not responding to
> communication requests from Panadrvr.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "DBS packet
send fail.").

> This alarm indicates that the DBS is not responding to
> communication requests from Panadrvr.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "DBS DCD
signal down.").

> Panadrvr has detected the loss of carrier detect on the API serial link.
> Panadrvr has just been loaded.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "DBS DCD
signal down (closing all open streams).").

> The same problem as above; however Panadrvr has been running.
> Any active client connections will be terminated.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "DBS
deadman timer fail (closing all open streams).").

> The DBS has failed twice in responding to keep alive packets from
> Panadrvr.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Unable to allocate Tserver buffer, return code = %d\n", rc).

> The Tserver has denied Panadrvr's request for a memory buffer.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Insufficient resources for newcall().").

> Panadrvr could not allocate more memory from the Novell OS for additional call blocks.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Send to server error first try (%d).", rc).

> Panadrvr could not send a packet out over the network. It will wait 2 seconds and try again.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Send to server error second try (%d).", rc).

> Panadrvr tried and failed a second time to send a packet over the network. The packet has been lost.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Ports -- Out of free ports.).

> Panadrvr is out of a critical system resource.

The following error messages indicate a severe problem in the low level task management system of Panadrvr. Panadrvr will attempt to recover from such situations; however successive errors of this type indicate that Panadrvr is in trouble. Should this occur, call Panasonic Technical Support.

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(acsRxPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(cstaRxPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(cstaSendResponsePort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(cstaToneEventHandlerPort) fail.")

TDILogErro(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(cstaEventHandlerPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(cstaConfEventHandlerPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(dbsRxThreadPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(netTxPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(appl_TX_Port) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(txrxReceivePort) fail.");TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(txrxThreadPort) fail.")

TDILOGERROR(dname, ERROR, ALMLOC, alarmcnt++, "Preceive(appl_RX_Port) fail.")

"AUDIT TRAIL" Messages:

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Display DBS-PC IO stopped")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Display DBS-PC IO started")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Log File Closed");TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Log File Opened")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Manual DBS reset command sent")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "MWI extension changed to %d", MWIExt)

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Manual monitor started on port %d", port)

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Manual monitor stop issued for port %d", port)

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Port Monitor Checking %s", (PortMonitorChecking == False) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "DCD Level Checking %s", (CheckDCD == False) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Watchdog Checking %s", (CheckWDTimer == False) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "CSTA clearcall function setting changed to %s", (cfp->clearcall == 0) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "SendInitOnMakecall setting changed to %s", (cfp->sendinitiatedonmakecall == 0) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++, "Send Fail Events setting changed to %s", (cfp->sendfail == 0) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++,
"Send Multiple Diverted Events setting changed to %s", (cfp-
>multipledivertedevents == 0) ? "disabled" : "enabled")

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++,
"Trace level changed to %s", tl)

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++,
"DBS is now online.").

   The DBS has positively responded to Panadrvr's startup sequence.

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++,
"Driver loaded, security level = %s", sl).

   Panadrvr has been successfully loaded on the Novell Server with a
   security level specified here.

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++,
"Call ID %d deleted from system", k).

   Technical Support issued a command to remove a call from the driver.

TDILOGERROR(dname, AUDIT_TRAIL, ALMLOC, alarmcnt++,
"Max call time value changed to %d hours", nv).

   The 'maxcalltime' value has been changed via the user menu.

The Panadrvr Menu System

The Panadvr Novell Telephony Services NLM comes equipped with a menu that provides maintenance and troubleshooting information and control as described in the following pages.

Caution: Because many of these items affect the real-time performance of Panadrvr, use of some menus during heavy traffic periods may cause problems with Panadrvr, client applications, or the server itself. *Avoid use of these menus during heavy traffic periods*.

```
  MCC/Panasonic Telephony Services Driver for the  DBS
  --------------------------------------------------------------------------------
               Time on line 000 days 01 hours 07 minutes 07 seconds

1. Display DBS Extension/Port Tables
2. Display Error Counters              h: N/A
3. Display Status Counters             i: Set Debug Trace Level
4. Display Resource Info               j: N/A
5. Display ACS Info                    k: Change MWI Activator
6. Display CSTA Stats/Info             l: Display Active Call List
7. Display DBS Status/Info             m: N/A
8. N/A                                 n: N/A
9. ShutDown                            o: Close Log File
a. Display Resource Names/IDS          p: Display Transfer Tables
b. Display Driver Queues               q: Display Monitor IDs
c. Port Monitor Info                   r: Display Conference Tables
d. Change Max Call Time Value          s: Display Runtime Config Structure
e. Call Processing Toggles             t: Insert comment into log file
f. Display API Control Signals         u: Display Call Times
g. Display Call Processing Stats
Enter Selection...?
```

1: Display DBS Extension/Port Tables

This selection produces a submenu as shown below. The user may select items 1 or 2. These 2 selections are not automatically refreshed. Press ESCape to exit.

```
 1: Display Extension to Port Tables
 2: Display Port to Extension Tables
 Enter 1 or 2 (ESCape to exit)...
```

Item 1: Display Extension to Port Tables

This selection displays the DBS extension/DBS port/DBS phone type information as sent to Panadrvr by the DBS. The items are sorted on extension value. A sample screen is shown below. Note that port values are 0-based.

```
*** Extension to Port/Type Xref Tables ***

100:000:03 101:001:03 102:002:03 103:003:03 104:004:03 105:005:03 107:007:02
108:008:01 109:009:01 110:010:01 111:011:01 112:012:01 113:013:01 114:014:01
115:015:01 116:016:01 117:017:01 118:018:01 119:019:01 120:020:01 121:021:01
122:022:01 123:023:01

press a key to return to Main Menu...
```

The format is Extension:Port:Type. See DBS Section 400 for the phone type meanings.

Note: Add 1 to the port number shown on this screen to determine the actual port on the DBS.

Item 2: Display Port to Extension Tables

This selection displays the DBS port/DBS extension/DBS phone type information as sent to Panadrvr by the DBS. The items are sorted on port value. A sample screen is shown below. Port values are 0-based.

```
*** Port to Ext/Type Xref Tables ***

000:100:03 001:101:03 002:102:03 003:103:03 004:104:03 005:105:03 007:107:02
008:108:01 009:109:01 010:110:01 011:111:01 012:112:01 013:113:01 014:114:01
015:115:01 016:116:01 017:117:01 018:118:01 019:119:01 020:120:01 021:121:01
022:122:01 023:123:01

press a key to return to Main Menu...
```

The format is Port:Extension:Type. See DBS Section 400 for the phone type meanings.

Note: Add 1 to the port number shown on this screen to determine the actual port on the DBS.

2: Display Error Counters

This selection brings up a real time (updated once per second) screen which displays the values of various error counters in the Panadrvr. These counts are reset by pressing 'C'.

```
   MCC/Panasonic Telephony Services Driver for the  DBS
   ------------------------------------------------------------------------------------
           Time on line 000 days 01 hours 57 minutes 05 seconds

***DBS***
Bad/No Resp to Select Req 00000098  Naks to Select Request 00000190
Aborted DBS select tries  00000037  DBS rx data timeouts   00000000
Answer Requests to DBS    00000007  DBS packets Nakd by PC 00000000
Driver selected, DBS no send data timeouts      00000000
***Driver***
Packets Nakd by DBS       00000000  Answer reqs from DBS   00000000
PC packet sends aborted   00000038
Net: Rx Errors            00000000  Tx Errors   00000000  GetBuf Fails 00000000
WatchDog Timeouts         00000003  Port Reconfigurations Received     00001357
DBS Resets Rx'd           00000059  Carrier Detect Losses              00000004

  Press <Esc> to return to the Main Menu, 'C' to clear the counters...
```

This screen is divided into 3 sections: errors originated by the DBS, errors originating in Panadrvr, and miscellaneous information. Fields are described as follows:

Section 1: DBS

Bad/No Resp to Select Req

This indicates that Panadrvr made an attempt to get the DBS's attention and the DBS did not respond appropriately.

Naks to Select Request

The DBS denied Panadrvr's request for communication.

Aborted DBS select tries

Panadrvr will make up to 7 attempts to select the DBS, after which time it aborts the attempt and increments this counter.

DBS rx data timeouts

Panadrvr's inter-character timer expired while receiving a transmission from the DBS.

Answer Requests to DBS

If the DBS does not respond to a transmission, Panadrvr sends an answer request.

DBS packets Nakd by PC

Panadrvr detected a transmission error while receiving a transmission. Panadrvr requested a resend.

Driver selected, DBS no send data timeouts

The DBS requested and was granted Panadrvr's attention. The DBS did not transmit any data.

Section 2: Driver

Packets Nakd by DBS

The DBS rejected a transmission from Panadrvr.

Answer requests from DBS

The DBS did not receive a response to a transmission and is asking Panadrvr to respond.

PC packet sends aborted

Panadrvr has dumped a packet intended for transmission to the DBS due to communication problems.

Section 3: Misc

RX Errors

Panadrvr detected an error while attempting to receive a packet from a client application. This is a network-related problem.

TX Errors

Panadrvr detected an error while attempting to send a packet to a client application. This is a network-related problem.

GetBuf Fails

Panadrvr's internal buffer manager returned a failure code to a request.

WatchDog Timeouts

Once per minute, Panadrvr asks the DBS if it is OK. The DBS is given 30 seconds to respond to this question. If it does not, this counter is incremented.

Port Reconfigurations Received

The number of times a port extension information packet is received from the DBS.

DBS Resets Rx'd

This is the total count of DBS reset messages received from the DBS.

Carrier Detect Losses

This is the total count of DCD signal loss with the DBS, indicative of API cable removal or DBS resets.

3: Display Status Counters

This selection displays general traffic information as shown in the example below. The user may press 'C' to clear these counters. This is a real-time screen.

```
MCC/Panasonic Telephony Services Driver for the DBS
    -------------------------------------------------------------------------------
             Time on line 000 days 00 hours 14 minutes 23 seconds

Packets:   Sent-> 00000019  Received-> 00000023
Commands: Sent-> 00000019  Received-> 00000063
Bytes:     Sent-> 00000266  Received-> 00001085
NetWork:  Sent-> 00000001  Received-> 00000001


  Press <Esc> to return to the Main Menu, 'C' to clear the counters...
```

Packets Sent

The total count of information packets sent to the DBS.

Packets Received

The total count of information packets received from the DBS.

Commands Sent

The total count of command type packets sent to the DBS. This will usually be the same as the count for Packet Sent.

Commands Received

The count of individual command type packets received from the DBS.

Bytes Sent

Total of all bytes sent to the DBS.

Bytes Received

Total of all bytes received from the DBS.

Network Sent

Total packet count transmitted to the network.

Network Received

Total packet count received from the network.

4: Display Resource Info

This memu item displays information used by Panasonic Technical Support. This is a real-time screen.

5: Display ACS Info

This menu displays information CSTA ACS stream operations. This is a real-time screen.

```
MCC/Panasonic Telephony Services Driver for the  DBS
    --------------------------------------------------------------------------------
            Time on line 000 days 00 hours 37 minutes 08 seconds

Total of Open Streams: 00
Stream Open  Requests: 00000001  Stream Close Requests: 00000001
Stream Abort Requests: 00000000  Stream Other Requests: 00000000
Stream Open Confirms:  00000001  Stream Open Denies:    00000000
Peak Opened Streams:   01
Invalid Requests:      00000000
Active Monitors:       000

Press <Esc> to return to the Main Menu...
```

Total of Open Streams

The current number of active client sessions.

Stream Open Requests

The number of client stream open requests received

Stream Close Requests

The number of client stream close requests received.

Stream Abort Requests

The number of client stream abort requests received.

Stream Other Requests

The number of miscellaneous client stream requests received (i.e., other than open, close, or abort).

Stream Open Confirms

The number of client stream open requests granted by Panadrvr.

Stream Open Denies

The number of client stream open requests denied by Panadrvr.

Peak Opened Streams

The maximum number of active streams with Panadrvr.

Invalid Requests

The number of unsupported ACS requests received by Panadrvr.

Active Monitors

The present count of individual DBS ports with active monitors.

6: Display CSTA Stats/Info

This selection displays miscellaneous counters involving CSTA-type information processed between the DBS and Panadrvr and the network and Panadrvr. This is a real-time screen.

```
MCC/Panasonic Telephony Services Driver for the  DBS
   ------------------------------------------------------------------------------------
           Time on line 000 days 01 hours 12 minutes 41 seconds

Total Requests  000012  Granted  0000012  Denied 0000000  Unsupported 0000000
DBS Response Timeouts (fail)      0000000  DBS Send Errors (fail)      0000000
Lost Positive Confs               0000000  Lost Negative Confs         0000000
Lost Query Confirmations          0000000

Answer Call   0000000 Clear Call  0000000 Clear Conn 0000000 Conf Call 0000000
Hold Call     0000000 Make Call   0000000 Query MWI  0000000 Query DND 0000000
Query FWD     0000000 Query LNR   0000000 Retr. Call 0000000 Set MWI   0000000
Set DND       0000000 Set FWD     0000000 Trans Call 0000000 MontorDev 0000009
Monitor Stop  0000000 GetApiCaps  0000003 Chg Filter 0000000

  Press <Esc> to return to the Main Menu...
```

Total Requests Granted

The count of network-received CSTA requests that Panadrvr processed and sent to the DBS.

Total Requests Denied

The count of network-received CSTA requests that Panadrvr processed and either rejected itself or were rejected by the DBS.

Total Requests Unsupported

Total network-received non-supported requests.

DBS Response Timeouts (fail)

Count of packets dumped by Panadrvr due to lack of acknowledgment from the DBS.

DBS Send Errors (fail)

Count of packets dumped by Panadrvr due to packet send errors.

Lost Positive Confs

CSTA positive confirmations received by Panadrvr from the DBS for which Panadrvr could not find the client owner.

Lost Negative Confs

CSTA negative confirmations received by Panadrvr from the DBS for which Panadrvr could not find the client owner.

Lost Query Confirmations

CSTA query confirmations received by Panadrvr from the DBS for which Panadrvr could not find the client owner.

Answer Call

Total CSTA Answer Call requests received from client applications.

Clear Call

Total CSTA Clear Call requests received from client applications.

Clear Conn

Total CSTA Clear Connection requests received from client applications.

Conf Call

Total CSTA Conference Call requests received from client applications.

Hold Call

Total CSTA Hold Call requests received from client applications.

Make Call

Total CSTA Make Call requests received from client applications.

Query MWI

Total CSTA Query Message Waiting Indicator requests received from client applications.

Query DND

Total CSTA Query DoNotDisturb setting requests received from client applications.

Query FWD

Total CSTA Query Call Forwarding requests received from client applications.

Query LNR

Total CSTA Query Last Number Redial requests received from client applications.

Retr. Call

Total CSTA Retrieve Call requests received from client applications.

Set MWI

Total CSTA Set Message Waiting Indicator requests received from client applications.

Set DND

Total CSTA Set DoNotDisturb requests received from client applications.

Set FWD

Total CSTA Set Call Forwarding requests received from client applications.

Trans Call

Total CSTA Transfer Call requests received from client applications.

MonitorDev

Total CSTA Monitor Device requests received from client applications.

Monitor Stop

Total CSTA Stop Monitor requests received from client applications.

GetApiCaps

Total CSTA Get API Capacity requests received from client applications.

ChgFilter

The number of CSTAChangeMonitorFilter Requests received from applications.

7: Display DBS Status/Info

This menu displays information about types of CSTA packets received from the DBS. This is a real-time screen.

```
    MCC/Panasonic Telephony Services Driver for the  DBS
    ---------------------------------------------------------------------------------
             Time on line 000 days 01 hours 50 minutes 27 seconds

Confirmations: Positive 00000015  Negative 00000000  Query   00000000
Events:        Tone     00000039  Tsapi    00000035  Unknown 00000000
DBS Status:    Online

  Press <Esc> to return to the Main Menu...
```

Confirmations Positive

Total positive replies received from the DBS for CSTA requests from Panadrvr.

Confirmations Negative

Total negative replies received from the DBS for CSTA requests from Panadrvr.

Confirmations Query

Total query replies received from the DBS for CSTA requests from Panadrvr.

Events Tone

Packets received from the DBS as CSTA Tone Events.

Events TSAPI

Packets received from the DBS as CSTA Events.

Events Unknown

Packets received from the DBS that were not recognized by Panadrvr.

DBS Status

Displays the status of the DBS as far as Panadrvr is concerned.

8: N/A

Menu not available.

9: ShutDown

This menu selection allows the user to shut down Panadrvr. If selected, Panadrvr will inform the user of any non-idle conditions existing in the system and then request confirmation to unload.

Note: This is the only way to effectively unload Panadrvr - attempts to 'unload' Panadrvr from the console will fail (Panadrvr intercepts these requests and denies them). In addition, although it is possible to abort Panadrvr by pressing certain keystrokes, this method is neither recommended not supported.

a: Display Resource Names/IDS

This is for field support use only.

```
*** Resource Names & Ids ***

***Ports***
acsRxPort: 0024  cstaRxPort: 0023  cstaSendResponsePort: 0022
cstaToneEventHandlerPort: 0021  cstaConfEventHandlerPort: 0020
cstaEventHandlerPort: 0019  dbsRxThreadPort: 0029, netTxPort: 0018
txrxThreadPort: 0028  txrxReceivePort: 0027
appl_TX_Port: 0026  appl_RX_Port: 0025
dispioThreadPort: -001

***Buffers***
cstaBufPool 0002  txrxBufPool 0000 applBufPool 0001
dispiobufPool -001


press <ESCape> to return to the Main Menu...
```

b: Display Driver Queues

This screens displays Panadrvr's resource usage with the Novell Tserver. This is a real-time screen. This screen is for field support use only.

```
    MCC/Panasonic Telephony Services Driver for the  DBS
    ---------------------------------------------------------------------------------------
--
          Time on line 000 days 00 hours 12 minutes 37 seconds

 MsgBufs:  Queued to Driver 0000  Queued to Tserver 0000
 MsgBufs:  Allocd by Driver 0000, Allocd by Tserver 0000
 MemBytes: Queued to Driver 00000000  Queued to Tserver 00000000
 MemBytes: Allocd by Driver 00000000, Allocd by Tserver 00000000

 press <ESCape> to return to the Main Menu...
```

c: Port Monitor Info

This screen displays the DBS ports (0 based) with active or reserved monitors attached.

```
    MCC/Panasonic Telephony Services Driver for the  DBS
    ---------------------------------------------------------------------------------------
          Time on line 000 days 00 hours 13 minutes 31 seconds

 Number of Ports with Active or Reserved Monitors: 0

 Prt Ext Ac Rd  Prt Ext Ac Rd  Prt Ext Ac Rv  Prt Ext Ac Rd  Prt Ext Ac Rd
 000 100 02 01  001 101 02 00  002 102 02 00  003 103 02 00  004 104 02 00

   Press <Esc> to return to the Main Menu...
```

The format is Port/Extension/ActiveMonitors/ReservedMonitors.

Note: Add 1 to the port number shown on this screen to determine the actual port on the DBS.

d: Change Max Call Time Value

Specifies the maximum time in hours that Panadrvr considers a call to be valid. Should this timer expire, the call is removed from Panadrvr and call cleared events sent to all the applications monitoring the affected extensions. Note, this has no effect on the actual DBS call.

The default is 12 hours.

e: Call Processing Toggles

This menu selection allows modification of certain CSTA event sequences. It should not be used unless recommended by Panasonic technical personnel

.

```
1: Disable CSTA ClearCall Commands
2: Disable Send Service Initiated Events due to Makecall Request
3: Disable Send Failed Events on Busy Tone
4: Disable Event Filtering
Enter 1-4 (ESCape to exit)...
```

1. Disable (Enable) CSTA ClearCall Commands

Normally, Panadrvr allows the CSTA ClearCall feature and indicates this when responding to the CSTA GetApiCaps request. If this option is disabled, Panadrvr will still allow the ClearCall feature, but will no longer indicate that it is doing so.

2.Disable(Enable)SendServiceInitiatedEventsduetoMakecallRequest.

This item disables (enables) Panadrvr's issuance of a Service Initiated (i.e., dialtone) event if Panadrvr detects this is due to a CSTA MakeCall request.

3. Disable (Enable) Send Failed Events on Busy Tone

In the DBS, the last remaining extension on a previously active call listens to busytone. Panadrvr interprets this event as a CSTA Failed Event and sends this event to all involved client applications. Some applications display this as 'Busy' while others report it as 'Failed' or in some other fashion. This switch determines whether or not Panadrvr issues this event to client applications.

4. Disable (Enable) Event Filtering

This disabled (enables) the drivers honoring of a stream's filters associated with a given device monitor.

f: Display API Control Signals

This is a real-time display of the API<->PC port control signals. The '-'
character represents an active level while the '_' character represents an
inactive level. The 3 signals represented are Data Carrier Detect, Data Set
Ready, and Carrier Detect Signal.

```
   MCC/Panasonic Telephony Services Driver for the  DBS
   ----------------------------------------------------------------------------------------
          Time on line 000 days 00 hours 28 minutes 39 seconds
                     *** API Port Control Signals ***


 DCD ----
 DSR ----
 CTS ----

   Press <Esc> to return to the Main Menu...
```

g: Display Call Processing Stats

This is a real-time display of calls, connections, and call caches within
Panadrvr.

```
  MCC/Panasonic Telephony Services Driver for the  DBS
   ----------------------------------------------------------------------------------------
          Time on line 000 days 00 hours 33 minutes 28 seconds

Present Active Calls   00000000  Present Active Connections  00000000
Peak     Active Calls  00000000  Peak    Active Connections  00000000
Initial Cache Count    00000500  Present Cache  Count        00000500
Active  Cache Count    00000000
Last Call ID Used      00000665
Maximum Monitors            50
Max Monitors/Port            3
Max Monitors Stream          8
   Press <Esc> to return to the Main Menu...
```

Present Active Calls

The count of active calls that Panadrvr is currently processing. A call involves 1 to 4 parties (trunks or extensions).

Present Active Connections

The count of active connections that Panadrvr is controlling. A connection is the occurrence of a monitored extension within an active call block.

Peak Active Calls

The maximum active calls Panadrvr has handled so far.

Peak Active Connections

The maximum connections Panadrvr has handled so far.

Initial Cache Count

At initialization, Panadrvr allocates enough system resources to process 'Initial Cache Count' calls.

Active Cache Count

The number of cache buffers currently in use.

Present Cache Count

If system traffic dictates, Panadrvr will allocate additional resources to process calls. Once allocated, these resources are not returned to the operating system until Panadrvr shuts down. This value displays the current cache setting.

Last Call ID Used

Lists the last Call ID used with Panadrvr.

Maximum Monitors

Displays the maximum number of individual port monitors allowed in Panadrvr.

Max Monitors/Port

Displays the maximum number of monitors per port allowed in Panadrvr.

Max Monitors/Stream

Displays the maximum number of monitors allowed per stream in Panadrvr.

h: N/A

Menu not available.

i: Set Debug Trace Level

This selection is only available in the debug version of Panadrvr. It allows the operator to select the level of status reporting to the system console (and log file if active) by Panadrvr.

```
Present setting 1
0: Tracing Off
1: Trace
2: Debug
3: Caution
4: Error
Enter 0-4 (ESCape to exit)...

0: Tracing Off
Disables all trace messages.
```

1. Trace

Enables the most verbose reporting by Panadrvr.

2. Debug

Enables a slightly less verbose reporting level.

3. Caution

Enables reporting only of items considered important.

4. Error

Enables the reporting only of items deemed critical by engineering.

j: N/A

Menu not available.

k: Change MWI Activator

Specifies the activator extension of a CSTA set message waiting indicator request. This is normally supplied through private data, however, most applications are not written to support this option for Panasonic. This option allows the command to be honored by the driver and passed to the DBS. If not set, and private data not supplied, the command is rejected.

This value is normally disabled (-1).

MWI is set to -1New Value (<Enter> for no change)?

l: Display Active Call List

Displays the real-time status of active calls within Panadrvr. This screen interferes somewhat with Panadrvr's real-time operation and should be used only by support personnel.

```
   MCC/Panasonic Telephony Services Driver for the  DBS
   -----------------------------------------------------------------
          Time on line 000 days 01 hours 06 minutes 33 seconds

CallID Type Port  State     Type Port  State     Type Port  State    Type Port  State
 00001 Int  0000  CONN      Int  0002  NONE      ---  0255  NONE     ---  0255   NONE
================================================================================


  Press <Esc> to return to the Main Menu...

```

Each row represents one assigned call block in Panadrvr. Each call block may contain up to 4 extensions or trunks. The format of the display is discussed below.

CallID:

The call id assigned by Panadrvr to this call block

Type:

The type of port associated with this connection. 'Int' indicates internal, 'Trk' indicates external while '---' indicates the slot is empty.

Port:

The 0 (zero) based DBS port value involved in this connection.

Note: Add 1 to the port number shown on this screen to determine the actual port on the DBS.

State:

The CSTA state of this connection as assigned by Panadrvr.

m: N/A

Menu not available.

n: N/A

Menu not available.

o: Open (Close) Log File (N/A)

This selection opens (closes) a trace message log file in the System directory of the SYS volume on the Novell server. This file maintains a copy of all trace messages generated on the system console by Panadrvr as selected by the trace level. This selection is only available on the Trace Enabled (debug) version of Panadrvr.

p: Display Transfer Tables

This selection is intended for Panasonic Technical Support use only.

q: Display Monitor IDs

This selection is intended for Panasonic Technical Support use only.

r: Display Conference Tables

This selection is intended for Panasonic Technical Support use only.

s: Display Runtime Config Structure

This selection displays Panadrvr's internal switches as set by command line load switches or menu toggle selections. See the Command Line Options section or Call Processing Toggles menu selection for an explanation of each item.

```
Api Port (1/2)             1
PC  Port (1-8)             1
Baud Rate                  19200
Security Level             Medium
Set MWI                    100
Log                        Off
Send Fail                  Enabled
Clear Call                 Enabled
Send Init on Makecall      Enabled
Maximum Call Time          12
Trace Level                Trace
Panadrvr Version           1.00
Module Instance            1
Event Filtering            1


Press any key to return to main menu...
```

t: Insert Comment into log file (N/A)

This selection allows the user to enter comments into the active log file if file logging is enabled. This option is available only on the Trace Enabled (debug) versions of Panadrvr.

u: Display Call Times

This selection displays the accumulated time for each current call.

```
Call ID  Min  Call ID  Min  Call ID  Min  Call ID  Min  Call ID  Min
00000684 0023 00000685 0021 00000686 0019 00000687 0023 00000690 0014
Call ID  Min  Call ID  Min  Call ID  Min  Call ID  Min  Call ID  Min
00000692 0011 00000693 0009 00000699 0002 00000703 0002 00000704 0001
```

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